LISTING OF THE CLAIMS:

Claims 1-4 (Cancelled)

5. (New) A method of wireless transmission of information, comprising:

(a) transmitting a signal comprising a single preamble randomly selected from among a group of available preambles, at a power level;

(b) determining if number of preamble transmissions has reached a limit;

(c) determining if an acknowledgement corresponding a preamble transmission is received from a base station;

(d) if the number of preamble transmissions has not reached the limit and there has been no receipt of a corresponding acknowledgement, repeating step (a) at a higher power level and repeating steps (b) and (c);

(e) ceasing transmitting of the signal, upon any determination at (b) that the number of preamble transmissions has reached the limit; and

(f) upon any determination at (c) that a corresponding acknowledgement is received from the base station, initiating transmission of information over a wireless spread-spectrum uplink channel to the base station.

6. (New) The method of claim 5, further comprising receiving information over a wireless spread-spectrum downlink channel from the base station.

7. (New) The method of claim 6, wherein the information received from the base station comprises any of packet data and power control information.

8. (New) The method of claim 5, wherein the initiating of transmission of information comprises:

randomly selecting a collision detection symbol from a number of possible collision detection symbols;

transmitting the collision detection symbol at a power level the same as the power level used for the preamble transmission immediately preceding the receipt of the corresponding acknowledgement; and

if a collision detection acknowledgment corresponding to the collision detection symbol is received, transmitting the information over the spread-spectrum uplink channel to the base station.

9. (New) The method of claim 8, wherein the information transmitted to the base station comprises at least one of packet data and power control information.

10. (New) The method of claim 8, further comprising receiving information over a wireless spread-spectrum downlink channel from the base station.

11. (New) The method of claim 10, wherein the information received from the base station comprises any of packet data and power control information.

12. (New) The method of claim 5, wherein during each transmitting at (a) the signal further comprises a pilot signal.

13. (New) The method of claim 11, wherein during each repetition of transmitting at (a), power level of transmission of the pilot signal increases.

14. (New) The method of claim 5, further comprising:

receiving a frame timing signal from the base station;

wherein each transmitting at (a) involves transmitting the signal comprising the single preamble in a time slot randomly selected from among a plurality of possible time slots defined in relation to the received frame timing signal.

15. (New) A method of wireless transmission of information, comprising:

(a) transmitting a signal comprising a single preamble randomly selected from among a group of available preambles, at a power level;

(b) determining if number of preamble transmissions has reached a limit;

(c) determining if an acknowledgement corresponding a preamble transmission is received from the base station;

(d) if the number of preamble transmissions has not reached the limit and there has been no receipt of a corresponding acknowledgement, repeating step (a) at a higher power level, transmitting a pilot symbol, and repeating steps (b) and (c);

(e) ceasing transmitting of the signal, upon any determination at (b) that the number of preamble transmissions has reached the limit;

(f) upon any determination at (c) that a corresponding acknowledgement is received from the base station, randomly selecting a collision detection symbol from among a number of possible collision detection symbols;

(h) transmitting the collision detection symbol at a power level the same as the power level used for the preamble transmission immediately preceding the receipt of the corresponding acknowledgement;

(g) if a collision detection acknowledgment corresponding to the collision detection symbol is received, transmitting information over a wireless spread-spectrum uplink channel to the base station; and

(h) receiving information over a wireless spread-spectrum downlink channel from the base station.

16. (New) The method of claim 15, wherein:

the information transmitted over the wireless spread-spectrum uplink channel to the base station comprises at least one of packet data and power control information; and

the information received over the wireless spread-spectrum downlink channel from the base station comprises at least one of packet data and power control information.

17. (New) The method of claim 15, further comprising:

receiving a frame timing signal from the base station;

wherein each transmitting at (a) comprises transmitting the signal comprising the single selected preamble in a time slot randomly selected from among a plurality of possible time slots defined in relation to the received frame timing signal.

18. (New) A spread-spectrum wireless mobile station, comprising:

a spread-spectrum transmitter;

a spread-spectrum receiver; and

a controller coupled to the spread-spectrum receiver for responding to received signals and coupled for controlling the spread-spectrum transmitter, such that in operation the wireless mobile station performs steps comprising:

(a) transmitting a signal comprising a single preamble randomly selected from among a group of available preambles, at a power level;

(b) determining if number of preamble transmissions has reached a limit;

(c) determining if an acknowledgement corresponding a preamble transmission is received from a base station;

(d) if the number of preamble transmissions has not reached the limit and there has been no receipt of a corresponding acknowledgement, repeating step (a) at a higher power level and repeating steps (b) and (c);

(e) ceasing transmitting of the signal, upon any determination at (b) that the number of preamble transmissions has reached the limit; and

(f) upon any determination at (c) that a corresponding acknowledgement is received from the base station, initiating transmission of information over a wireless spread-spectrum uplink channel to the base station.

19. (New) The mobile station of claim 18, wherein the initiating of transmission of information comprises:

randomly selecting a collision detection symbol from a number of possible collision detection symbols;

transmitting the collision detection symbol at a power level the same as the power level used for the preamble transmission immediately preceding the receipt of the corresponding acknowledgement; and

if a collision detection acknowledgment corresponding to the collision detection symbol is received, transmitting the information over the spread-spectrum uplink channel to the base station.

20. (New) The mobile station of claim 18, wherein at least during a repetition of (a), the signal transmitted further comprises a pilot signal following the selected preamble.

21. (New) The mobile station of claim 18, wherein:

the controller is for controlling operation of the remote station for performing the additional step comprising receiving a frame timing signal from the base station; and

each transmitting of the signal at (a) involves transmitting the signal comprising the single preamble in a time slot randomly selected from among a plurality of possible time slots defined in relation to the received frame timing signal.

22. (New) A base band processor for use in a spread-spectrum wireless remote station, comprising:

an acknowledgment detector for detecting an acknowledgment in received spread-spectrum signals;

a data and control processor, for detecting and processing data and control information contained in received spread-spectrum signals;

a encoder, for encoding data;

a preamble generator for generating preambles;

a multiplexer for multiplexing the encoded data and the preambles;

a packet formatter, coupled to the multiplexer, for formatting the multiplexed data and preambles into packets; and

a controller coupled to the acknowledgment detector for controlling the preamble generator, the multiplexer and the packet formatter, such that in operation the base band processor performs steps comprising:

(a) transmitting a signal comprising a single preamble randomly selected from among a group of available preambles, at a power level;

(b) determining if number of preamble transmissions has reached a limit;

(c) determining if an acknowledgement corresponding a preamble transmission is received from a base station;

(d) if the number of preamble transmissions has not reached the limit and there has been no receipt of a corresponding acknowledgement, repeating step (a) at a higher power level and repeating steps (b) and (c);

(e) ceasing transmitting of the signal, upon any determination at (b) that the number of preamble transmissions has reached the limit; and

(f) upon any determination at (c) that a corresponding acknowledgement is received from the base station, initiating transmission of information over a wireless spread-spectrum uplink channel to the base station.

23. (New) The base band processor of claim 22, wherein the initiating of transmission of information comprises:

randomly selecting a collision detection symbol from a number of possible collision detection symbols;

transmitting the collision detection symbol at a power level the same as the power level used for the preamble transmission immediately preceding the receipt of the corresponding acknowledgement; and

if a collision detection acknowledgment corresponding to the collision detection symbol is received, transmitting the information over the spread-spectrum uplink channel to the base station.

24. (New) The base band processor of claim 22, wherein at least during a repetition of (a), the signal transmitted further comprises a pilot signal following the selected preamble.

25. (New) The base band processor of claim 22, wherein:

the controller is for controlling operation of the base band processor for performing the additional step comprising receiving a frame timing signal from the base station; and

each transmitting of the signal at (a) involves transmitting the signal comprising the single preamble in a time slot randomly selected from among a plurality of possible time slots defined in relation to the received frame timing signal.

26. (New) The base band processor of claim 22, further comprising:

a spread-spectrum modulator for modulating formatted packets from the packet formatter for transmission over the wireless uplink channel; and

a spread-spectrum demodulator for demodulating the received spread-spectrum signals.

27. (New) The base band processor of claim 26, further comprising an interleaver for interleaving encoded data from the encoder and supplying interleaved encoded data to the packet formatter.